Towards A New Model Of Teaching Creativity Through Metaphors.

DR charbati Youssef
Hassani University, settat

Introduction
The topic of creative thinking has been marked by two characteristics. It was discussed by academicians who have analysed the scientific side of it and it was marred with complexity and abstractness. The focus of creative thinking thinkers was on giving general advice to the reader and usually abstract one. They failed to provide a clear roadmap outlining the steps to follow in order to come up with creative ideas.

Students are taught to believe that each person has his point of view which gives the impression that they simply have to contemplate to generate ideas. Following specific strategies as a technique was never of specific focus. Students are taught that there exist many different perspectives and viewpoints and that people can see the same thing and yet differ in their perceptions. The traditional view of creative thinking proposals sees creativity as a sign of genius that can be developed by suggesting general advice. The problem with creativity is that students are asked to be creative without enabling them to analyse well. This leads them to believe that creativity is about imagining new things instead of developing things creatively.

This study proposes to look at creativity as a form of additional thinking and not outside box thinking. This study proposes that we use metaphor not only to develop creativity but also to decompose ideas and recompose them. Creativity is suggested as complimentary to analogical and analytical thinking and on the side of it.

This article uses metaphor as a tool to develop thinking skills and creativity. It proposes using metaphor as a model to figure out complexities of certain issues and then based on these models reaching findings that could not be reached using other ways. It suggests seeing abstract complex topics as systems and applying systematic rules and compostants as ways to understand abstract issues.

A very significant part of the metaphoric studies involves making sense of the complex situation in which the problem occurs. Problems can be analysed by structuring them. Any issue can be discussed trying to understand it in terms of its original meaning. we can also understand things in terms of other examples. We understand- for example- flying in terms of pigeons. Using metaphors as model to analyse and decompose abstract issues shedding lights on new perceptions and views that could be the base of creative ideas. In fact creativity is but new ideas bases on new perceptions and new conceptions.

Background to the Study
To understand how we think in a certain situation, we need to understand the stepping stones that we use when we think. Concepts control how we think and by understanding them and controlling them we will be able to manipulate thinking. Metaphors reveal our concepts. Concepts are formed by taking a limited amount of information and produce a global perception of another individual and then based on this perception we make inferences about a certain thing. In other words concepts formation consists in the formation of impressions plus the inferences we make about things. Concepts interconnect things in our minds to represent how we perceive, act, react and consider. The role of concepts is to provide a means of organizing information and filtering out other information. According to Lakoff and Johnson (1980) our concepts formation is usually metaphorical nature.

We understand things in terms of other things we are familiar with (Lakoff and Johnson:1980) and when we speak we use the concepts we have in the metaphors we produce. For example: when we say: “This argument is hard to defeat”, the fact that we are not aware of the fact that the word ‘defeat’ shows that we have underlined the concept of argument is war at the moment of speaking shows that speech is not the concrete side of thought and that talking is thinking aloud. Metaphor then is a form of categorization ( ) and these categories are used to view things as categories in the world.

Metaphors organize our experience, creating realities that guide our futures and reinforce interpretations. Truth is therefore truth relative to some understanding, and that understanding involves categories emerging from our interaction with experience. The same process responsible in making metaphors is also responsible of making
Although it is true that our thinking system is based on boxes, it is not true that this system is the result of the Greek philosophy. Our mind processes information to give meaning to it. And what gives meaning to things is our classification of it according to categories (boxes) we have in mind.

It is a characteristic of the mind to categorize and not the result of Greek influence in our thinking. De Buono proposes 'lateral thinking', by which he means to follow a new path instead of the one we are used to it, in order to be creative. The question is whether the new path can do without our mental system of classification. The answer is no. It will be only a reclassification of the concepts according to new proposed concepts; in this, it is similar to marginal metaphors. In marginal metaphors we propose viewing something in terms of a new categorization like the viewing of humans in terms of lions. Marginal metaphors create a new categorization and thus it does not do without it. In the same manner when Edward suggests that to be creative is to get rid of the mental categorization we have in mind, he is suggesting only to reclassify our categories and not to get rid of the boxes, as he believes.

Categorization generates expectations and beliefs. Metaphors, as a form of classification and categorization (categorizing war with argument) and reclassification (ignoring the normal categories and creating new ones) lies at the wellspring of human creativity and an attempt to delineate this cognitive faculty is an leads to better understand our creative abilities. Creativity can happen by viewing something in terms of a new categorization like viewing of humans in terms of lions. We have to create a new categorization In the same manner when Edward suggests that to be creative is to get rid of the mental categorization we have in mind, he is suggesting only to reclassify our categories and not to get rid of the boxes, as he believes.

Metaphors can be seen as analogies which explain new or complex ideas. A good metaphor is enriching and says more than a logical explanation. In creative thinking metaphors are also used to generate ideas. This may be done consciously—as in syneectics—or unconsciously, as in hypnosis. A more inclusive way of looking at metaphors is to see them as a part of everyday speech which affects the ways in which people perceive, think and act. Realities and problems are defined by metaphors, although people might not be aware of this.

The limitation of our thinking and creativity and our difficulty in problem solving is most of the time is not the result of our lack of ideas but because that we block our ideas because of deviance from the right intelligence behavior. Intelligence behavior determines the success or the failure of any work being done. What we shall do here is to think of way that can free the mind or free the idea from any obstacle that can hinder it. Getting rid of obstacles and obstruction means allowing the idea to grow up and develop and allowing creativity to flourish and allowing problems to be solved. The limitation of our creativity and our difficulty in problem solving is most of the time is not the result of our lack of ideas but because that we block our ideas following several faults. one of the intelligent behaviour we can teach studentsto compose concepts and decompose them by using metaphors.

**Objective of the study**

This article aims to show how metaphor can help to enhance creative thinking skills Linguistic studies have covered topics of different domains and has touched on creativity but a clear application of linguistics findings in the area of creative thinking has yet to be seen. This article posposes that creativity based metaphors can generate unfinished ideas.

The aim of this article is to propose a new model in creative thinking. Many books and articles were written to propose methods of developing creative thinking. However, these methods fail to provide a clear map on how to move forward in thinking. In fact, there is an assumed view that creativity cannot take place if we encircle it with fixed models and plans.

This article aims at proposing not views on how to think and ideas that can help thinking but a model that can that can be followed by anybody in order to develop creative ideas. A new model is proposed based on which we can develop creativity. In addition, this article uses metaphors as a tool to develop creativity. Metaphors have been analysed as tools of creativity and this article is showing how metaphor can be used to boost creativity. We shall exemplify the importance of using metaphor as a tool of creativity.

**Literature Review**

In his article on Metaphors and creativity: Direct, moderating, and mediating effects, Alex Marin, Martin Reimann, Raquel Castaño checke the influence of metaphors on creative cognition. His methodology is based on examining consumers'
creativity change in relation to metaphoric meaning in image that contain metaphoric meaning. Frank de Mink examines how new ideas are created due to metaphors... he advocated the idea that metaphor can be used as a creative tool only if we consider them as part of the daily speech as they influence the way we think an act. He stresses that realities are seen through metaphor he claims that it is even possible to talk about a theory of metaphor in creative thinking.

Aristotle proposes that metaphor is a mark of genius is because he sees it a way of uncovering relations of similarity. Creativity is basically a way of revealing similarities and dissimilarities between different domains.

Maria-Jose Sanchez-Ruiz & Manuela Romo Santos & Juan Jiménez Jiménez examined the impact of the use of metaphors on scientific thinking. They claimed that metaphor is a mapping between a concrete and a clear domain to a not so clear domain which could result in novel findings. They conducted empirical studies of the relations between creativity and metaphor and its central role in scientific process.

Mumford (2004) in his metaphor research confirms the general findings of the recent research on metaphor. He equated the metaphor to a creator of novel products. In a summary of scientific research into creativity, Michael Mumford suggested: "Over the course of the last decade, however, we seem to have reached a general agreement that creativity involves the production of novel, useful products" (Mumford, 2003, p. 110).

Guilford drew a distinction between convergent and divergent production (commonly renamed convergent and divergent thinking). Convergent thinking involves aiming for a single, correct solution to a problem, whereas divergent thinking involves creative generation of multiple answers to a set problem. Divergent thinking is sometimes used as a synonym for creativity in psychology literature. Other researchers have occasionally used the terms flexible thinking or fluid intelligence, which are roughly similar to (but not synonymous with) creativity. Guilford distinguishes between convergent and divergent production while convergent thinking strives to come up with a single solution to a problem divergent thinking seeks to find multiple solutions to one specific problem.

Daniel Pink, in his 2005 book A Whole New Mind, repeating arguments posed throughout the 20th century, argues that we are entering a new age where creativity is becoming increasingly important. In this conceptual age, we will need to foster and encourage right-directed thinking (representing creativity and emotion) over left-directed thinking (representing logical, analytical thought). However, this simplification of 'right' versus 'left' brain thinking is not supported by the research data. Pink (2005) highlights the importance of creativity in recent times. He claims that there is a need to boost creativity over logical and analytical thinking. Though the researcher could not support his claim by research data; his analysis is well illustrative and shows the extent to which our modern age is in need of creativity more than other forms of thinking.

In 2005, Alice Flaherty highlights the physical anatomy of our brain and how it affects creativity. Based on evidence shown in brain damaging; she came to conclusion that frontal lobes is responsible of idea generation and the temporal lobes is in charge of evaluation. She showed that anxiety or depression significantly weaken creativity by affecting the frontal lobes on other hand she confirmed that abnormalities seen in temporal lobe plays a significant role in reinforcing creative abilities. Different neuronal networks influence creativity. Metaphorical reasoning is an iterative process through which designers gradually increase their knowledge of a design situation. Basically, the use of metaphors aids in structuring design problems, which by definition are non-routine (Gero, 2000a). Numerous examples illustrating the relevance of metaphors in design practice can be found in the architectural domain. For example, the dictum 'form follows function' - meaning that the external appearance of a building comes as a result of the building's internal use - influenced a whole generation of architects identified with the Modern Movement (Colquhoun, 2002).

First-year design students who lack expertise and have not developed cognitive schemas (Lawson, 2004) might have found it easier to think in terms of concrete and practical situations while dealing with the design situation. Metaphor use in the final stages of the design process is more complex and therefore demands more expertise (Casakin, 2006).

One of the metaphors that we propose is teaching students to think by making them discuss topics as systems. A system is anything that has more than one element and has shared goal. It is important to know how things are organized in a systematic way in order to be able to understand a certain topic as...
topics are gathered information in a systematic way; analyzing how this topic is systematized means understanding how it works and providing a description of it.

A group of ideas following a certain topic are divided into interrelated aspects. Each aspect is made of a group of elements that are related to each other and that when interacted result in a set of actions that lead to change on events and other elements. These elements are either in harmony and this leads to results or in struggle and this lead to the disunity of the system. They have functions and objectives and the main objective gathers the whole system

A group of actions following a certain order (sequence; pattern, similarity that need conditions to lead to results and reflect concepts and principles. The principles are results from our experiences or from our culture. In the environment; there exist other systems: they could be in harmony or struggle. When they have the same objective or complementary objectives and when they have enough resources they are in harmony but when they are having limited resources they struggle;

In An action we use tool that change an element or a situation and then moving the element and then another tool take the element and then it moves to another stage part made of another system that does another set of actions

Parts are organized and coherent, and are all related to a single topic. Almost every piece of should be organized into parts. In any thinking situation we can consider the right analysis is based on understanding all the ingredients of that situation and the factors affecting them; we deal with events as systems and space. By system we mean a series of elements (words or sentences) performing certain actions to achieve certain objectives. The nature of the system is defined by the content of the system and its structure. The content of the system is the subject of the system. The structure is about the elements and the relations.

The system is an interaction between a group of things working to gether to achieve a certain purpose: it is made of the following elements. Organized knowledge means a plan; terms and their details; categories and their subcategories. Completeness; moving forward without turning back, consistency which means no contradiction and all the details fit in their place.

Methodology

This article proposes a new model based on which we can develop creative thinking. This model deems complex things as system with elements and relations and based on this model we can no only analyse our complex issues but propose solutions to problems arising. These propbelsm are seen as systems failor.

To validate the model the design proposes certain concepts that can be perceived d based the system model. Three concepts are proposed to be seen as systems, ‘teaching’, ‘marriage’, ‘citizenship’. Then after analysing these concepts based on a system model, we propose creative analysis and solutions to the problems arising from system failure.

This article uses the metaphor an abstarcy concepts s is a system to understand the issue, its nature, its components and its interaction. The factors affecting the issue works in a systematic way. The system is an interaction between groups of things working together to achieve a certain purpose: it is made of the following elements. This system which means the elements and then the organization of these elements occur according to patterns or systems

The model proposed in this article is based on perceiving concepts as systems, thus the composants of the concept are seen in terms of systems. A system is made of a series of elements performing certain actions to achieve certain objectives.

Elements: They are the components of the system. Elements form units when they share certain characteristics.

Objective: the destination the system strives to reach

Function: the actions done by the elements to reach the objective.

Relations: They are different types of relations such as neutrality, support, complementation, struggle and contradiction.

Unity: it is achieved when we have complementation and single leadership. It is based on a common subject and objective and direction.

Complementation: the objectives of some elements depend on the functions of others.

Support: the elements are helping the other elements in their functions or objectives

Harmony: the elements are working in accordance with the objectives of other elements
and they are not harming each other.

**Neutrality**: the elements are not obstructing the functions or the of each other. Neutrality is positive if the others elements functions are not harming the system but negative if it is harming the system.

**Struggle**: the elements are harming each other

**Contradiction**: the elements are denying each other

**Leadership**: the leadership that guides the direction of the elements, coordinates between them, and controls the communication.

**Beliefs**: are important in defining the roles of and expectations of the elements.

**Rules**: are the boundaries that define the limits of the actions and the space of the system.

**Communication**: communicating the targets, the needs, the path based on terms used to describe a certain system. For example, components of writing are called words but in marriage are called husband and wife.

**Outcome**: the product of the system. It is measured based according to the objectives.

**Failure of system**: means two things: the disruption of the system. 2) or its failure to achieve the objective or the destruction of the system or part of it.

**Marriage**

**The Elements**: The elements of marriage: husband and wife and daughters and sons

- **Unity**: a) parents: husband and wife forming one unity called parent
  - b) daughter and sons form one unity called children

**The objective** could pleasure (sex) or children or cooperation in meeting the needs of the couple

**Functions**: The function of man is to provide financial needs. The function of woman is home and children. The elements of the Western families have different functions. Most of the western families both parents provide the financial needs.

**Relation**:

- **Unity**: the family is supposed to be united which means that they have the same objective, protecting and satisfying the needs of each other.

**Complementation**: the wife and the husband complements each other. Together they can produce results (children) and they could satisfy the needs of each other.

**Support**: each element is supposed to support the other elements; examples of this is found when someone is sick or got trouble with the police or when the children have exams.

**Harmony**: it is expected to exist otherwise the existence of the family could be at risk.

**Neutrality**: is not to be found in this system because blood relations are seen very strong relations.

**Struggle**: is expected to exist but cannot reach the extent of contradiction.

**Contradiction**: happens if one of the parent feels the objective of one is at the expense of another. There are many crimes because one party is in love with an other person and decide to get rid of the spouse in order to be with the lover.

**Leadership**: it could be the husband who runs the family or both parents depending on the culture.

**Beliefs**: defines the roles of the parents and the children, and their expectations and their interests such as children schooling, housing and expenditures.

**Rules**: faithfulness, permission

**Language and terms**: the man is called the husband and the woman the wife and the children the son and daughter. The male element is called the husband and the female is wife. The break up of the system is called divorce. The unity is called marriage.

**Outcome**: the wife and the husband may give birth to children and see to their education and growth.

**System failure**: the break up of the system. It can take place if the central objective of the elements is not met and the objective depends on expectations and expectaions depend on cultural impressions of functions. is divorce as it means the system stops to exist because the basic elements are not longer interacting with each other.

**Teaching**

**Space**: Classroom

**The elements. The unit**: a) teacher b) student
Objective: Learning

Functions: teacher teachers and students learner

Relation:

Unity: we dont need unity in this system as the relation is depending serving for a certain purpose for a certain time in a certain space.

Complementation: both the students and the teacher need each other to have learning happens.

Support: the teacher as the leader of the classroom is supposed to support the other elements (the learners) by meeting their learners needs. The students are encouraged to support each other but not part the systems needs.

Harmony: it is expected to exist otherwise the existence of the objective of learning does not take place.

Neutrality: is not to be found in this system because learning has to be achieved and this requires the cooperation of the elements.

Struggle: is expected to exist from the part of some elements

Contradiction: it is not expected to exist in this system because it depends on support and contradiction cannot take place only in an system that its elements dont have to share the same objectives. In the classroom it accepts only that share the same ideas and interests and have the same destination.

Leadership: The leader is the teacher and has full authority over the students.

Beliefs: beliefs are cultural and this leads to cultural specificity of rules such as clothing which differ according to societies. For example in muslim societies clothing in classes are supposed to respect certain specifications. Such rules are inexistant in western societies.

Well

Rules: all that is supposed to make sure that the objective is met such as absence, lateness, acts, faithfulness

Language:

Outcome: a change in the minds of the students and a degree to be given to the students.

System Failure: Rules related to objective are not respected absence, students are not learning because of noise, teacher incapacity, lack of desire; objective are not met because the function of the teacher is not performed

Citizenship

Space: Country

The elements: The state, and the people,

The objective: Having a life according to the needs nad values of the citizens.

The function: Each citizen fulfills a function that is needed by someone else.

Relation:

Unity: they are united only by having the same nationality, the same leadership and general property. But the system is too large to have organic unity

Complementation: the elements are complimenting each other by having different jobs that fill in the needs of each other.

Support: Each element is supposed to support the other elements and this is called public interest

Harmony: it is expected to exist otherwise the existence of the family could be at risk..

Neutrality: it exists among a big segments of society.

Struggle: crimes could be a form of struggle that can be found in any society. Business and political competition is another form of struggle.

Contradiction: there could be some intellectual contradictions in the form of social, ideological or political views, for example racism, fashism and extremism once these contradictions become physical they could become armed struggle and the system fails.

Leadership: it is called governmenet.

Beliefs: Each society has its norms that are derived from religion Harm is cultural. This leads to the difference between societies as far as rules are concerned.
**Rules**: are all that prevents harm to the society. Some societies include other beliefs that are of religious origin.

**Language**: the leader is called the government, the elements are called citizens, the book that contains general principles is called constitution.

**Outcome**: no specific change is expected but permanent needs are consistently sought to be met such health services, security and good education.

**System failure**: the system breaks up when we contradiction between two big segments take place. When this happens, elements start struggling with each other. This struggle reaches a high level and it can become denying each other in the form of civil war if the objective is not met. People seek accepted life in accordance with their values and needs (peace, food and material needs, spiritual needs). Other reasons of failure could be ideological beliefs that see the conduct of the leadership or part of society is against the beliefs of some elements.

**Conclusion**
In conclusion, we can say that this article outlines new approach to creative thinking. It proposes a plan that can be followed to come up with creative ideas. This plan is based on

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